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TRANSMITTAL  
FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number

10/576,481

Filing Date

April 21, 2006

First Named Inventor

Zissimos Mourelatos

Art Unit

To be determined

Examiner Name

To be determined

Total Number of Pages in This Submission

Attorney Docket Number

UPN0028-100 (Q3313)

## ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached/Authorized	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment / Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	Form PTO SB/08a (4pp.); 35 reference cited; 32 copies of references submitted; return card.
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application		
<input type="checkbox"/> Reply to Missing Parts under 37 CFR1.52 or 1.53		
<b>Remarks</b>		
<b>EXPRESS MAIL LABEL NO: EV 770972174 US</b>		
<b>DATE OF DEPOSIT: 2-23-07</b>		

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm	Cozen O'Connor		
Signature			
Printed Name	Mark DeLuca		
Date	2-23-07	Reg. No.	33,229

## CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below

Signature			
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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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UPN0028-100 (Q3313)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: **Zissimos Mourelatos et al.**

Serial No.: **10/576,481**

Group Art Unit: **To be determined**

Filed: **April 21, 2006**

Examiner: **To be determined**

Title: **SHORT INTERFERING RNA AND MICRO-RNA COMPOUNDS AND METHODS OF DESIGNING, MAKING AND USING THE SAME**

EXPRESS MAIL LABEL NO: EV 770972174 US  
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**MAIL STOP AMENDMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

**INFORMATION DISCLOSURE STATEMENT**

Pursuant to 37 C.F.R. §§ 1.56 and in accordance with 37 C.F.R. §§ 1.97 and 1.98, information relating to the above-identified application is hereby disclosed, the Examiner in charge of the above-identified application is requested to consider and make of record the references listed on the PTO Form SB/08A and Forms SB/08B, formerly known as PTO Form 1449, submitted herewith.

Inclusion of the information submitted herewith is not to be construed as an admission that the information is material as that term is defined in 37 C.F.R. § 1.56(b).

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made.

**This Information Disclosure Statement is being filed:**

- within three months of the filing date of the patent application.
- within three months of the date of entry into the national stage as set forth in 37 C.F.R. § 1.491 of the international application.
- before the mailing date of a first Office Action on the merits.

- after the mailing date of a first Office Action on the merits, but before the mailing date of a Final Office Action under 37 C.F.R. § 1.116 or a Notice of Allowance under 37 C.F.R. § 1.311, and accordingly is accompanied by:
  - the Statement under 37 C.F.R. § 1.97(e) (see "Statement" below);  
**or**
  - the Fee of \$180.00 set forth in 37 C.F.R. § 1.17(p); or
  - No fee is owed by the applicant(s).
- In accordance with 37 C.F.R. § 1.129(a), this Information Disclosure Statement is being filed in connection with  the first or  second After Final Submission, and accordingly is accompanied by the Statement under 37 C.F.R. § 1.97(e) (see "Statement" below) and the fee of \$180.00 as set forth in 37 C.F.R. § 1.17(p), is attached.
- after the mailing date of a Final Office Action under 37 C.F.R. § 1.116 or a Notice of Allowance under 37 C.F.R. § 1.311, but before the payment of the Issue Fee, and accordingly is accompanied by the Statement under 37 C.F.R. § 1.97(e), (see "Statement," and "Fees" below).
- Copies of the references (except the U.S. Patent documents) listed on the attached PTO Forms SB/08a and SB/08b, formerly known as PTO Form 1449, are enclosed.

**EXCEPT THAT:**

- In view of the voluminous nature of references \_\_\_, and the likelihood that this reference is available to the Examiner, a copy is not enclosed herewith.
- In accordance with 37 C.F.R. § 1.98(d), copies of the following references listed on the attached PTO Form SB/08A and PTO Form SB/08B, formerly known as PTO Form 1449 are not enclosed herewith because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application(s) for which a claim for priority under 35 U.S.C. § 120 have been made in the instant application.

If any of the foregoing publications are not available to the Examiner, Applicant will endeavor to supply copies at the Examiner's request.

**Statement under 37 C.F.R. § 1.97(e)**

The undersigned attorney hereby states that each item information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.

**Fees**

No Fee is owed by the applicant(s).

The Information Disclosure Statement Fee of \$180.00 under 37 C.F.R. § 1.17(p) is enclosed herewith.

**Method of Payment of Fees**

Attached is a check in the amount of \$\_\_\_\_\_ . This form is submitted in duplicate.

Charge Deposit Account No. 50-1275 in the amount of \$180.00. This form is submitted in duplicate.

Please charge any deficiency or credit any overpayment to Deposit Account 50-1275.

No fee or Statement is required under 37 C.F.R. § 1.97(b).

Respectfully submitted,



Mark DeLuca  
Registration No. 33,229

Dated: 2-23-07

COZEN O'CONNOR, P.C.  
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~~Substitute for form 1449A/PTO~~

## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

*(Use as many sheets as necessary)*

## Shea

1 of 4

*Complete if Known*

10/E76 481

*Application Number* 10/576,481

*Filing Date* April 21, 2006

**First Named Inventor** **Zissimos Mourelatos**

*Art Unit* To be determined

Examiner Name To be determined

Attorney Docket Number: UFNU0028-100 (Q3)

## **ENT DOCUMENTS**

## **U.S. PATENT DOCUMENTS**

## FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/576,481
(Use as many sheets as necessary)				Filing Date	April 21, 2006
				First Named Inventor	Zissimos Mourelatos
				Art Unit	To be determined
				Examiner Name	To be determined
Sheet	2	of	4	Attorney Docket Number	UPN0028-100 (Q3313)

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
	AD	Bernstein, E. et al., "Role for a bidentate ribonuclease in the initiation step of RNA interference," <i>Nature</i> (Jan 18, 2001), 409,363-3.			
	AE	Carmell M. A. et al., "The Argonaute family: tentacles that reach into RNAi, developmental control, stem cell maintenance, and tumorigenesis," <i>Genes Dev</i> (Nov 1, 2002), 16, 2733-42.			
	AF	Catalanotto, G. et al., "Gene silencing in worms and fungi," <i>Nature</i> (Mar 16, 2000) 404, 245.			
	AG	Doi N. et al., "Short-interfering-RNA-mediated gene silencing in mammalian cells requires Dicer and eIF2C translation initiation factors," <i>Curr Biol</i> (Jan 8, 2003), 13,41-6.			
	AH	Elbashir et al., "Functional anatomy of siRNAs for mediating efficient RNAi in <i>Drosophila melanogaster</i> embryo lysate," <i>Embo J</i> (Dec 3, 2001), 20,6877-88.			
	AI	Fire et al., "Potent and specific genetic interference by double-stranded RNA in <i>Caenorhabditis elegans</i> ," <i>Nature</i> (Feb 19, 1998), 391,806-11.			
	AJ	Grishok et al., "Genes and mechanisms related to RNA interference regulate expression of the small temporal RNAs that control <i>C. elegans</i> developmental timing," <i>Cell</i> (Jul 13, 2001), 106, 23-34.			
	AK	Hamilton et al., "A species of small antisense RNA in posttranscriptional gene silencing in plants," <i>Science</i> (1999), 286, 950-2			
	AL	Hammond, S. M. et al., "Argonaute2, a link between genetic and biochemical analyses of RNAi," <i>Science</i> (Aug 10, 2001), 293,1146-50.			
	AM	Hutvagner et al., "A cellular function for the RNA-interference enzyme Dicer in the maturation of the let-7 small temporal RNA," <i>Science</i> (Aug 3, 2001), 293, 834-8.			
	AN	Hutvagner et al., "A microRNA in a multiple-turnover RNAi enzyme complex," <i>Science</i> (Sep 20, 2002), 297,2056-60.			
Examiner Signature		Date Considered			

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Sheet	3	of	4	Attorney Docket Number	UPN0028-100 (Q3313)

<b>NON PATENT LITERATURE DOCUMENTS</b>			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	AO	Jackson A.L. et al., "Expression profiling reveals off-target gene regulation by RNAi," <i>Nat Biotechnol</i> (Jun, 2003), 6,635-7.	
	AP	Ketting, R.F. et al., "Dicer functions in RNA interference and in synthesis of small RNA involved in developmental timing in <i>C. elegans</i> ," <i>Genes Dev</i> (Oct 15,2001), 15, 2654-9.	
	AQ	Knight, R.W. et al., "A role for the RNase III enzyme DCR-1 in RNA interference and germ line development in <i>Caenorhabditis elegans</i> ," <i>Science</i> (Sep 21,2001), 293, 2269-71.	
	AR	Lagos-Quintana et al., "Identification of novel genes coding for small expressed RNAs," <i>Science</i> (2001) 294, 853-8.	
	AS	Lau C. et al., "An abundant class of tiny RNAs with probable regulatory roles in <i>Caenorhabditis elegans</i> ," <i>Science</i> (Oct 26,2001), 294, 858-62.	
	AT	Lee et al., "An extensive class of small RNAs in <i>Caenorhabditis elegans</i> ," <i>Science</i> (Oct 26,2001), 294, 862-4.	
	AU	Lee, R.C. et al., "The <i>C. elegans</i> heterochronic gene lin-4 encodes small RNAs with antisense complementarity to lin-14," <i>Cell</i> (Dec 3,1993), 75,843-54.	
	AV	Llave C. et al., "Endogenous and silencing-associated small RNAs in plants," <i>Plant Cell</i> (Jul, 2002), 14,1605- 19.	
	AW	Llave C. et al., "Cleavage of Scarecrow-like mRNA targets directed by a class of <i>Arabidopsis</i> miRNA," <i>Science</i> (Sep 20, 2002), 297,2053-6.	
	AX	Martinez J. et al., "Single-stranded antisense siRNAs guide target RNA cleavage in RNAi," <i>Cell</i> (Sep 6,2002), 110, 563-74.	
	AY	McManus, T. et al., "Gene silencing in mammals by small interfering RNAs," <i>Nat Rev Genet</i> (Oct, 2002), 3, 737-47.	

Examiner Signature		Date Considered	
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Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				<i>Application Number</i>	10/576,481
<i>(Use as many sheets as necessary)</i>				<i>Filing Date</i>	April 21, 2006
				<i>First Named Inventor</i>	Zissimos Mourelatos
				<i>Art / Init</i>	To be determined
				<i>Examiner Name</i>	To be determined
Sheet	4	of	4	<i>Attorney Docket Number</i>	UPN0028-100 (Q3313)

<b>NON PATENT LITERATURE DOCUMENTS</b>					
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
	AZ	Mourelatos, Z. et al., "miRNPs: a novel class of ribonucleoproteins containing numerous microRNAs," <i>Genes Dev</i> (2002) 16, 720-8.			
	BA	Nykanen, A. et al., "ATP requirements and small interfering RNA structure in the RNA interference pathway," <i>Cell</i> (Nov 2, 2001), 107, 309-21.			
	BB	Olsen P.H. et al., "The lin-4 regulatory RNA controls developmental timing in <i>Caenorhabditis elegans</i> by blocking LIN-14 protein synthesis after the initiation of translation," <i>Dev Biol</i> (Dec 15, 1999), 216, 671-80.			
	BC	Palatnik et al., "Control of leaf morphogenesis by microRNAs," <i>Nature</i> (Aug 20, 2003), 257-263.			
	BD	Plasterk R.H. et al., "RNA silencing: the genome's immune system," <i>Science</i> (May 17, 2002), 296, 1263-5.			
	BE	Reinhart B.J. et al., "The 21-nucleotide let-7 RNA regulates developmental timing in <i>Caenorhabditis elegans</i> ," <i>Nature</i> (Feb 24, 2000), 403, 901-6.			
	BF	Reinhart B.J. et al., "Small RNAs correspond to centromere heterochromatic repeats," <i>Science</i> (2002) 297:1831.			
	BG	Rhoades M.W. et al., "Prediction of plant microRNA targets," <i>Cell</i> (Aug 23, 2002), 110, 513-20.			
	BH	Seggerson K. et al., "Two genetic circuits repress the <i>Caenorhabditis elegans</i> heterochronic gene lin-28 after translation initiation," <i>Dev Biol</i> (Mar 15, 2002), 243, 215-25.			
	BI	Tabara et al., "The rde-1 gene, RNA interference, and transposon silencing in <i>C. elegans</i> ," <i>Cell</i> (Oct 15, 1999), 99, 123-32.			
Examiner Signature				Date Considered	

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